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Effect of faults on electrical equipment in power substation: A case study of metropolitan electricity authority's power system (Conference Paper)

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Abstract

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This paper studies the influence on electrical equipment and the frequency disturbance caused by the Line to Line Fault in the power system. This study takes the actual situation at Metropolitan Electricity Authority (MEA)'s substation which is 115 V power transmission line. The study examines the voltage and the frequency changes occurring in the power system by using MEA's power system simulation with Transient Program (ATP-EMTP) used in the 115 V power transmission line, Line to Line Fault, at 10 km approximately occurs at Y-B phase. As a result of the power system simulation, the Voltage Waveform is changed and shifted. It resulted in the frequency decreases. The lowest frequency of B phase is about 41.578 Hz ort 16.844% when compared to the power system frequency at 50 Hz and resulted in a maximum voltage phase R is 25.9 kV or increase 87.5%. © 2018 IEEE

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